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An
Inaugural Dissertation
on
Dropsy
by
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of Virginia.

Withdrawn during his examination
at his own request March 5th. 1823
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Examined by Drs Chapman - Physick - Hare

Dropsy

This is one of the diseases which has been described by the older medical writers; but the developement of its true nature has been left to modern times.

Deeming it unneceſsary on the present occasion to trace its history and attend to all the various opinions which have been entertained respecting its remote and proximate causes and its appropriate remedies, I will confine myself to a few of its more common forms and their remedies; sufficient for the elucidation of the principles upon which the original diseased action takes place, and upon which all the forms and locations of Dropsy most probably depend —

By the term Dropsy we understand a preternatural collection of serous or watery fluid in the cellular membrane or the cavities of the body; which collections have received various

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appellations according to their location. Of these, the three most common forms are, Hydrothorax, Ascites, and Anasarca; and it is to these that I propose to confine my attention.

We may presume that the cause of Dropsy being general, every cavity in the body capable of being distended, may become the seat of this disease. Among these the Thorax is one which frequently exhibits the symptoms of Dropsy in their most alarming extent and unequivocal character.

The symptoms of Hydrothorax are, a sensation in the chest of the fluctuation of a fluid, sometimes sensible to the patient, at others only discoverable by the Physician, after minute examination. Difficulty of breathing occasioned by the preſsure of the hydropic fluid upon the lungs; Increased difficulty of breathing and anxiety of feeling in a recumbent posture and immediate alleviation of them upon aſsuming an erect position. Shortneſs of breath and Cough which is at first dry, but as

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the disease advances, becomes more troublesome and
accompanied with an expectoration
expectorant of thin mucus; paleness of the face and sudden interruption of sleep by a sensation of suffocation.

The urine is diminished in quantity, highly coloured and deposits a sediment. It is also stated by Blackall to be coagulable by heat. The feet and legs are, in some instances, affected by œdematous swelling. A numbness in the Arms also attends some instances of Hydrothorax.

When all these symptoms are apparent no doubt can reasonably be entertained of the existence of the disease in question. When the fluctuation of the fluid is perceived by the patient without the concurrence of other characteristic symptoms, in any remarkable degree, it may sometimes be referred to the Stomach when that viscus is distended with fluid. The difficulty of breathing, palpitation of the heart, aggravated by bodily exertion, and distressed feelings in a recumbent posture, may also be ranked as symptoms of cardiac or pulmonary derangement independent of hydropic diathesis; but when all the symptoms which have been ensume

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been enumerated, occur more especially the fluctuation in the chest, being equally perceptible when the stomach is full and at a considerable time after any thing has been introduced into it, demonstrate the existence of Dropsy.

Hydrothorax sometimes makes its appearance without any previous symptom of Dropsy in any other part. It is not always general in the cavity of the thorax, being sometimes confined to one side alone.

The prognosis in Hydrothorax is generally unfavourable.

The Hydrops Pulmonum is attended by symptoms so similar to those of the last mentioned form of Dropsy, as scarcely to be distinguishable. The continual difficulty of respiration, however, not alleviated by change of position, the greater effect of motion, the pain about the præcordia and the impossibility of making a copious inhalation, may enable

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the practitioner to decide, in some instances, the nature of the case.

The Dropsy of the pericardium is still more difficultly ascertained. Sauvages mentions frequent Syncope and a tremulous pulsation between the third and fifth ribs, as indicative of it.

Ascites is the name given to Dropsy when it occurs in the abdomen. This location of the disease is more common than Hydrothorax, and, as the abdomen is more susceptible of examination ab externo than the Thorax; not being, like it, enclosed by a bony structure, the existence of the present form of Dropsy and its extent are capable of more satisfactory demonstration

In Ascites the water may be extravasated in the general sac of the peritoneum, or it may be contained in a number of small bags called Hydatids. In some instances the omentum has been found to be the seat of the disease; and in others sacs containing the hydropic fluid are found adhering to the abdominal

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versa, giving rise to the term Hydrops saccatus, or encysted dropsy.

The symptoms of Ascites are, a preternatural enlargement of the abdomen. a fluctuation, evident to the feeling by applying one hand to one part of the abdomen while it is suddenly struck pressed upon by the other. a sense of weight and distension. Sometimes most evident in the most depending part. A difficulty of breathing consequent to the pressure of the contents of the abdomen upon those of the Thorax. The urine as in other forms of Dropsy, is diminished in quantity, more viscid than natural and frequently deposits a sediment. A slight degree of fever is, also not an uncommon attendant upon Ascites.

Encysted Dropsy may be distinguished from Ascites by the swelling being confined more to a part, while in the latter it is general.

Of encysted Dropsy, that of the ovaria is perhaps the most common. This form of disease commences by a swelling in the right or left

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left hypochondriac region, where a moveable tumour is formed, causing an uneasy, indescribable sensation in the part but not much pain. The cyst may at length become so large as to be indistinguishable from Ascites. The remarkable symptom of Abdominal enlargement common to Ascites and Hydrops Ovarii has, it is said, been mistaken for Pregnancy. But the methods of distinction between dropsical swellings and Pregnancy are so numerous and obvious, that I do not consider an enumeration of them neceſsary.

Anasarca is that form of Dropsy which pervades the cellular membrane generally. The skin in this disease is pale, soft, and capable of being compreſsed into small pits by the fingers, which do not immediately disappear upon the removal of the preſsure. This œdematous swelling is more common to the lower extremities, and is always greatest after the patient has been for some time in an erect posture, especially if he has exercised much in walking. This may be owing to two causes, first the gravitation of the fluid through the cellular membrane towards

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towards the most depending part, and, secondly, from the greater difficulty of the return of the venous blood. Accordingly, rest in a recumbent position mitigates the symptoms in the feet, ancles and legs, while more of the fluid occupies the region of the abdomen and chest. Pain in the ancles, thirst, febrile pulse, scantineſs of urine, and sometimes difficulty of breathing, are symptoms of Anasarca. This disease may exist alone, but it is not unfrequently found accompanying other forms of Dropsy, as hydrothorax and ascites.

Causes of Dropsy

In aſsigning a cause to the collection of dropsical effusions, we must first aſsume the principle, that whatever ultimate causes may have operated upon the system, the immediate derivation of the fluid in question must be from the blood. The manner in which such deposition from this fluid may take place is our next subject

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There is continually an exhalation of watry particles from the blood, which gives rise to cutaneous perspiration and to which, also, we must ascribe the existence of the lubricating fluids every where to be found throughout the system. Besides this provision in the animal economy for the continual production of watry or serous fluid, there is another calculated for its removal, so that a supernatural or unneceſsary accumulation of it may not take place. Hence it is obvious, that the quantity of fluid in the cavities or interstices of the system, must depend upon the comparative activity of these two actions, namely, the secretory and the absorbent. If the first of these is stimulated to exceſsive action, while the other is not proportionally affected; or, if the second is diminished while the first continues in unabated activity, the same result must take place; namely, an accumulation of fluid matter in the interstices of the body.

An obstruction to the free return of the venous blood to the heart, is one of the causes which may

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influence this disproportion between the secretory and absorbent actions. Because, if the extreme veins refuse to receive their common proportion of blood, the arteries in connexion with them, continuing their natural action, the blood or such parts of it as are admiſsible into the exhalent veſsels, will naturally tend more forcibly to this diverted action. Lower has rendered this opinion more than hypothetical by enclosing the ascending Cava of an animal, in a ligature, and observing serous extravasations as the consequence. The experiment varied so as to substitute the jugular vein for the vena cava exhibited similar results. The circumstance of exposure to cold influencing dropsical affections, also illustrates this position.

The Suppreſsion of natural evacuations is aſsigned as a cause of Dropsy. That circumstances of this nature, do sometimes attend the disease, is undoubtedly true; but, it does not appear to be perfectly understood, whether they are produced by the same causes which gave rise to the Dropsy, or whether

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they are really to be ranked among the causes of it. The former appears to have been the opinion of Dr Cullen.

A general debility is that state which is most favourable to the existence of Dropsy, or at least, the most suitable for the action of those proximate causes which produce watry effusions in the cavities of the body. Hence any agent that will affect the healthy tone of the system may be traced as a cause of this disease. nevertheless, the disease itself cannot be termed one of debility, inasmuch as it is attended by such increased action as to require depleting remedies. For our doctrine of the febrile nature of Dropsy, we are, I believe, indebted to the late Dr. Rush. Among the remote or predisposing causes may be ranked, frequent salivations, long continued evacuations and protracted indulgence in Spirituous liquors. Drunkards, indeed, proverbially, die of Dropsy. Viceral obstructions also give rise to some forms of the disease.

As in Hydrothorax, Ascites and Anasarca the parts are supplied with absorbents, whose office it is to

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remove unneceſsary matter, and, if properly performed, would carry off the effused fluid, the continuance of the disease, at least, if not its origin, must be referred to the absorbents. Dropsy, therefore, may be ranked among the diseases of the absorbent system.

In the cure of Dropsy, three indications present themselves – First. to remove the effused fluid; Second to diminish the morbid action; and Third, to increase that of the absorbents.

The removal of the fluid may be accomplished either by mechanical means, or by attention to the third indication – viz. by stimulating the absorbent system.

In Hydrothorax such difficulties present themselves to the Surgeon, that tapping is seldom resorted to. In the first place, the operation must be performed immediately in the neighbourhood of parts which could not be wounded without the most imminent danger to the patient; so that the operation can only be admiſsible when a skillful Surgeon is directed by

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a perfect knowledge of the immediate location of the effusion: And but few cases, if any, occur, in which we can decide in this respect. Secondly, Cases do occur of the fluid being contained in parts which no operation can reach, without carrying death with it. at least, this is most probable. We do not know what parts of the human body are absolutely intollerant of the slightest wound, but experience suggests that some organs are so constituted.

In Ascites and Anasarca, however. the case is different. There being in these cases no bony chest to envelop the fluid, and bar our research, the skin and a few strata of cellular membrane, being frequently the only parts to be touched, the trochar can be used with decision and advantage.

I do not conceive tapping to be neceſsary, except when the quantity of fluid is so great, as to produce very considerable distension. When the belly is much enlarged and tapping is determined upon, the fluid should be drawn off gradually, and a bandage should be

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applied round the abdomen to compensate for the reduction of preſsure upon its contents by the water; a sudden reduction of which, might be injurious, by determining the blood too forcibly towards the viscera, which may be supposed to have been deprived of their usual quantity of blood, on account of the undue preſsure which they had to sustain.

In the greatest number of Dropsical cases, other means are relied upon exclusively of the operation of tapping. The general object of all of them is to promote the discharge of the fluid by the natural outlets of the system. These remedies are not very limited in their number. They may be said to include several claſses of the Materia Medica, namely, Cathartics, Diaphoretics and Diuretics. Many of the substances, however, that have been formerly used in Dropsy have given way to the superior power of a few modern prescriptions.

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that is at present applied to the cure of Dropsy, and its success is illustrative of the improvement of Modern Pathology in its opposition to the former practice, which consisted in the almost exclusive dependence upon tonics. As an accompaniment to the lancet Cathartics must be regularly exhibited, so that the bowels may be kept in somewhat more than a merely loose state. By these means much of the swelling and inflammatory action will be reduced; but they are not always sufficient to effect a cure. Among the most useful Cathartics in Dropsy, the Tartrite of Potash deserves to be mentioned. As a hydrogogue, perhaps it is unrivalled while it acquires additional power by its diuretic virtues. It is frequently given in combination with Jalap.

The Scilla Maritima and Rad: Senaka Senega are also among the most efficacious remedies for Dropsy. Combined with Calomel their operation upon the absorbent system is increased.

I have mentioned only those methods of cure for Dropsy which are the most powerful and obvious, and which are most generally adapted to the disease, as it commonly appears. There are a variety of other remedies which have been employed and still continue in use, whose powers may be considerable and peculiarly adapted to particular cases. Have not, however, considered it necessary to enter upon so elaborate a detail of the varieties of Dropsy, and its remedies, as would comprehend all their peculiarities.